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**Efficacy of Atrial Antitachycardia Pacing for Termination of Atrial Tachyarrhythmias**

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Automatically applied atrial antitachycardia pacing (atp) has recently been introduced in implantable antitachycardia devices. However, the efficacy and the benefit of atrial atp in patients with atrial tachyarrhythmias (at) including atrial fibrillation (af) is unknown.

In the European leaf trial, midtronic at 500 devices were implanted in patients with documented at prior to implantation. At 1 month, patients were randomized to crossing-over 6-month therapy (atp on/off) periods. In the therapy period, atp sequences were delivered within 48-72 at episodes after at onset and with 32-72 at episodes between each non-successful atp run. All the patients had the same atp value programming (3 atp; 10 mns/atp).

At a mean 8-month follow-up, 122 patients out of 101 entrolled in the study, exhibited at episodes. Over 5359 stored episodes, 1455 at occurred in the patients having completed the double TSP.C. One sheath was used to insert the mapping tool (Lasso, Biosense-Webster Inc. or Constellation, Boston Scientific Co.) in the pulmonary veins and the ablation or, alternatively, the angiography catheter were inserted in the second sheath. After one month, transesophageal echocardiograms are performed to evaluate residual shunt.

Results: 73 double TSP.C procedures have been performed in 60 pts with no complication; in 13 pts a second ablation was required > than 1 month later, with no additional difficulties. Two sheaths in the left atrium allowed independent advancing and rotation of the catheters, often required in this mapping and ablation procedure. In 12 cases, in whom the atrial septum was particularly resistant to the first puncture, the presence of the first sheath facilitated the second puncture, keeping in place the atrial septum. No shunt was observed through atrial septum at the follow-up echocardiogram.

Conclusions: double TSP.C is feasible and it is not necessarily more complex than the single TSP.C. It gives the advantage of independent maneuvering of the mapping and ablation catheters. No residual shunt is observed during follow-up.

**Left Atrial Hypertrophy and P Wave Shape Abnormalities Impact the P Wave Dispersion**

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Many patients (pts) with paroxysmal atrial fibrillation (paf) present in standard electrocardiogram different P wave shape abnormalities (PWSA).

In this study we analysed 157 consecutive pts with PAF 85 women and 72 men with a middle age of 64 years. The main cause of PAF was: coronary artery disease -52, atrial hypertension -50, valvular heart diseases -18, lone -15 and other. We assessed P wave dispersion (PWD) as a difference between the maximum and the minimum P wave duration obtained from 12-lead ecg.

Left atrial diameter (LAD) was obtained from transesophageal echo (parasternal longitudinal axis, M-mode). Left atrial enlargement was when LAD > 40 mm. According to P wave shape pts were divided into following subgroups: without PWSA - group PWSA(-) 99 pts and with abnormalities such as: so-called "P mitrale". PWSA(+M) - 33 pts and with biphasic P wave in III, avF leads - PWSA(+B) - 25 pts. 

**Results**

<table>
<thead>
<tr>
<th>Pmax (ms)</th>
<th>PWD (ms)</th>
<th>Y'</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWSA(-)LAD&lt;40</td>
<td>108.6</td>
<td>32.3</td>
</tr>
<tr>
<td>PWSA(-)LAD=40</td>
<td>114.8</td>
<td>38.9</td>
</tr>
<tr>
<td>PWSA(+M)LAD&lt;40</td>
<td>126.3</td>
<td>43.6</td>
</tr>
<tr>
<td>PWSA(+M)LAD=40</td>
<td>130.4</td>
<td>44.3</td>
</tr>
<tr>
<td>PWSA(+B)LAD&lt;40</td>
<td>105.0</td>
<td>36.6</td>
</tr>
<tr>
<td>PWSA(+B)LAD=40</td>
<td>124.9</td>
<td>49.4</td>
</tr>
</tbody>
</table>

Conclusions: Pts with PWSA - like biphasic type and left atrial enlargement have increased PWD. Pts with PWSA- like P mitrale type- have increased PWD independently on LAD. Also pts without PWSA and with LAD > 40 mm present increased PWD.

**ECG Signs Mimicking Acute Inferior Wall Myocardial Infarction and Elevated Myocardial Damage During Isolation of Pulmonary Veins for Focal Atrial Fibrillation**

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**Objective:** Treating patients with paroxysmal or permanent atrial fibrillation is a frequently performed procedure nowadays. This method focuses on isolation of the pulmonary veins (PV). Associated complications like stenosis of PVs have been reported and are now well recognized. Also, thrombus formation and coagulum of the catheter have been published. Affections on the coronary circulation have never been described.

**Methods and Results:** We report about two patients, who were assigned for paroxysmal fibrillation ablation. Treatment with at least two antiarrhythmic drugs has failed. The procedure was performed during sinus rhythm using a single catheter system (Revelation-HELD). After successful ablation of the left PVs complete block occurred for 6 beats while moving towards the right upper PV passing along the dorsal part of the left atrium. Moreover, ST-segment elevation in leads II, III and avf as well as symptomatic angina appeared. Immediately performed coronary angiography showed no severe stenosis. The cardiac Troponin I readings showed a maximum of 0.32 ng/ml 8 hours after ablation. After ablation no elevation was observed in our control group.

**Conclusion:** Our cases showed signs of acute inferior wall infarction while touching the dorsal part of the left atrium. Results of chemical values as well as angiography ruled out severe ischemia. In our view, these findings are caused by a severe vagal reaction or coronary spasm. If no pericardial effusion is present and ECG signs as well as symptoms disappear, the ablation procedure can be progressed without further invasive evaluation. We think these findings should be considered when discussing procedural complications with the patients undergoing PV ablation for atrial fibrillation.